

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

### **III. REMARKS**

4. The Office Action Dated December 29, 2004 has been carefully considered.

Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested.

#### **A. Change of Inventorship**

5. Note that a change of inventorship was sent with the response to the previous office action, so that first named inventor is now Kendyl A. Roman.

#### **B. References**

6. The following U.S. patents were considered in the office action:

- US Patent No. 5,619,995, Lobodzinski, filed April 15, 1997,  
("Lobodzinski " or "Lobod" for short)
- US Patent No. 5,046,027, Taffe et al., filed September 3, 1991

#### **C. Overview of Office Action**

7. The office action rejected claims 1-35 in view of Lobodzinski (U.S. Patent No. 5,619,995).

#### **D. Claim Amendments**

8. A typo (i.e. "devise") was introduced in claim 4 in the last office action. Further, Applicant believes claim 4 as originally submitted was in error in that the specification does not provide support for "transmitting the video stream of images to the source device". Claim 4 appears to have parallel language to claim 14 which reads, "generating the stream of images and transmitting the stream of images to the storage device". Claim 4 has been amended to have language parallel to claim 14. No new matter was added by this amendment. This amendment was not made to overcome prior art but to fix obvious errors.

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

**E. Claim Rejections under 35 U.S.C. 102**

9. The office action rejected claims 1-35 as being anticipated by Lobod.

**Overview of the Present Invention**

10. The present invention discloses a method and apparatus for transmitting video images which allows a viewer to receive at the receiving display device a video stream of frames in a lesser quality, low-resolution, storage-efficient format (e.g. 150 Kbytes per second, page 14 line 20). After the viewer has seen at least a portion of the low quality video stream, the viewer is able to determine one or more sections of interest. The viewer then marks the beginning and end of each section of interest. After the viewer determines the sections of interest, a request is send to the transmitter to transmit the same section of interest, that was received in the first low quality compression format, in a much higher quality, high resolution, less-storage efficient second enhanced (or high quality) compression format (e.g. 2.5 Mbytes per second, page 15 lines 3-4, which is over 16 times larger, or higher quality, than the first low quality format). Note that the *duration* of the section of interest is *determined after* the video is transmitted in the first format, and that the *duration* of a section of interest is *arbitrarily marked* by the viewer based on interest after the video stream has been viewed.

11. While the first compression format is useful for selecting one or more areas of interest, the enhanced second format is required to provide significantly higher quality video, such as can be used for medical diagnosis.

**A Transmitting Device (with a Source Device) and a Remote Receiving Device**

12. All of the embodiments of the present invention have a transmitting device (either a transmitter 103 or a server 150) that is closely coupled with a source device that transmits a video stream of images to at least one receiving device. The receiving device(s) are

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

not closely coupled with the source device but receive transmissions from the transmitting device.

13. The title of the present invention is "System for Transmitting Video Images Over a Computer Network to a Remote Receiver". The Field of the Invention relates to the field of communications systems. (See page 1). "[T]he transmitting device and the receiving device communicate over a network..." (page 4, lines 3-5). (emphasis added to all)

14. The plain meanings of the word transmit include "to send or convey from one place to another", "to convey abroad or to another", and "to send out a signal either by radio waves or by a wire".

15. Thus the transmitting and receiving of the present invention must be able to occur in different places and the act of transmitting involves sending the stream of video images from one place to another. Typically, the communication is transmitted over a network, but the network connection could be a dedicated, direct connection from one place to another.

#### **Differences Between Lobodzinski and the Present Invention**

16. There are a number of differences between Dr. Lobodzinski's disclosure and the present invention.

17. Lobodzinski has a source device, e.g. ultrasound 200 or Diagnostic Imaging System (DIS) 17. Lobodzinski also has a local computer 6 and a storage device 7 that is part of the Motion Video Transformation System (MTVS) 100 that is closely coupled with the DIS 17 or US 200. As shown in Figs 1 and 2, both the DIS 17 and the MVTs 100 are in close proximity to the patient 300 (see Lobod Fig 2 transducer 20, 9:50-52) and thus to each other. There are several high speed, raw (uncompressed) data links between the DIS and MVTs (e.g. 9, 14, 15, 16, 18, 19, 32, 34, 35, and 36) which also require close coupling in the same place. One skilled

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

in the art would understand that the MVTTS 100 would be designed to replace a traditional S-VHS tape recorder (Lobod, see regarding VCR control signals 15, 3 and 4 in 8:35-63) and probably carried on the same cart as the DIS 17.

18. However, the local computer 6 and storage device 7 cannot be the receiving device of the present invention, because it lacks several features required by the claims. Lobod's computer 6 and storage device 7 could satisfy some of the elements of the transmitting device of the present invention, but Lobod fails to teach or suggest the receiving device or features of claims of the present invention.

19. That Lobod does not anticipate the present invention is clearly seen by a thorough analysis of claim 22 which requires:

- A source device.
- A "transmitting device coupled to the source device to receive and store the video stream of images"
- A "receiving device coupled to the transmitting device to receive the video stream of images in a first format, display the video stream of images for a user to mark one or more sections of interest, transmit a request for an enhanced version of the sections of interest and receive from the transmitting device the sections of interest within the video stream of images in a second format, wherein the second format represents an enhanced version of the first format."

Lobod may teach the first two elements but fails to teach the required third device, the receiving device.

20. Lobod further fails to teach or suggest the details of the receiving device:

Application # 09/436,432

Amendment Dated: May 31, 2005

Reply to Office Action Dated: December 29, 2004

- Receiving the video stream of images in a first format (which is not the enhanced second format).
- Displaying the video stream of images for a user at the remote receiving device to mark one or more sections of interest.
- Transmitting a request back from the receiving device to the transmitting device for enhanced version of the sections of interest
- Received from the transmitting device the enhanced sections of interest in a second format which is an enhanced version of the first format.

21. Further, the claims of the present invention requires at least two types of storage devices: a storage device which is part of the transmitting device (e.g. claim 13) and a received storage device (e.g. claim 26, see also claim 2). Lobod only teaches one storage device.

22. Further while Lobod teaches two monitors, neither is the display of the receiving device that is used by the remote user to view, and mark, the transmitted video.

**Claim 1 Not Anticipated or Rendered Obvious by Lobodzinski**

23. Regarding claim 1, Applicant respectfully disagrees with the Office Action's conclusion that Lobod discloses a receiving device (items 6 and 7). As explained above, Lobod does not teach "a method of transmitting" to a receiving device that is in another location. Instead items 6 and 7 are part of the MVTs 100 that is tightly coupled with the DIS 17 as explained above.

24. Further, Lobod does not teach "transmitting...in a first format to the receiving device" because it does not teach transmitting nor does it clearly teach a receiving device. The references cited by the office action disclose what happens on the source or transmitting end but not about the receiving end.

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

25. Further, Lobod does not teach the step of "receiving a request...from the receiving device" or the step of "transmitting the marked portion...in a second format...[which] represents an enhanced version of the first format.

**Claim 2 Not Anticipated or Rendered Obvious by Lobodzinski**

26. Regarding claim 2, Applicant respectfully disagrees with the Office Action's conclusion that Lobod discloses "of storing the original video stream of images at the receiving device". As explained above, Lobod fails to clearly teach the receiving device or any of its functions. Further, Lobod fails to teach the storage device at the receiving device that is separate from the storage device at the transmitting device, as explained above.

**Claim 3 Not Anticipated or Rendered Obvious by Lobodzinski**

27. Regarding claim 3, Applicant respectfully disagrees with the Office Action's conclusion that Lobod discloses storing the marked portion of the video stream of images to replace a corresponding portion of the original video stream of images". As explained above, Lobod fails to clearly teach the receiving device or any of its functions, including the ability for the remote user to mark a portion of the received video. Further, Lobod fails to teach the storage device at the receiving device that is separate from the storage device at the transmitting device, as explained above.

**Claims 4-5 Not Anticipated or Rendered Obvious by Lobodzinski**

28. Claim 4 has been amended. Claims 4 and 5 are dependent on claim 1 and should be allowable for all the reasons stated regarding claim 1.

**Claim 6 Not Anticipated or Rendered Obvious by Lobodzinski**

29. Regarding claim 6, Applicant respectfully disagrees with the Office Action's conclusion that Lobod discloses "displaying the video stream of images at the receiving device".

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

As explained above, Lobod fails to clearly teach the receiving device or any of its functions, including the ability for the remote user to view the received video. Further, Lobod fails to teach the display device at the receiving device, instead Lobod teaches two displays at the transmitting end (internal display monitor 25 in the US 200 and external monitor 13 in the MVTs), neither of which may be used for display at the receiving device.

**Claim 7 Not Anticipated or Rendered Obvious by Lobodzinski**

30. Regarding claim 7, Applicant respectfully disagrees with the Office Action's conclusion that Lobod discloses "marking the marked portion of the video stream of images at the receiving device". As explained above, Lobod fails to clearly teach the receiving device or any of its functions, including the ability for the remote user to view and mark portions of the received video. Further, Lobod fails to teach the display device at the receiving device, instead Lobod teaches two displays at the transmitting end (internal display monitor 25 in the US 200 and external monitor 13 in the MVTs), neither of which may be used for display at the receiving device.

**Claim 8 Not Anticipated or Rendered Obvious by Lobodzinski**

31. Claim 8 is dependent on claim 6 and should be allowable for all the reasons stated regarding claim 6, namely the lack of the display step at receiving device.

**Claim 9 Not Anticipated or Rendered Obvious by Lobodzinski**

32. Claim 9 is dependent on claim 6 and should be allowable for all the reasons stated regarding claim 6, namely the lack of the display step at receiving device.

33. Further, the Office Action strains to apply the limitations of claim 9 on the system of Lobod. Claim 9 requires complex operation at the receiving end that provides novel and useful benefits to the user, namely being able to review received portions of the video

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

received in the low quality first format and being able to begin marking portions of interest prior to receiving the entire video. These required elements of claim 9 are not taught or suggested by Lobod.

**Claim 10 Not Anticipated or Rendered Obvious by Lobodzinski**

34. Claim 10 is dependent on claim 1 and should be allowable for all the reasons stated regarding claim 1, namely the lack of the receiving device.

35. Further, the annotations of claim 10 are added to the video stream of images which refers back to the video that is being transmitted and received at the receiving end. These required elements of claim 9 are not taught or suggested by Lobod.

**Claim 11 Not Anticipated or Rendered Obvious by Lobodzinski**

36. Claim 11 describes a novel feature wherein the user, who is at the receiving end of the transmission, is monitored (inherently by the receiving device) to determine if he is viewing a particular image in the received video stream. The remote viewer essentially marks the portion of interest (in this case an image) by lingering on that image, and the system automatically transmits that image in the second format. Lobod does not teach nor suggest the required elements of claim 11.

**Claim 12 Not Anticipated or Rendered Obvious by Lobodzinski**

37. Claim 12 describes a novel feature where upon receiving the request for an enhanced version of a marked portion from the receiving device, the system stops transmitting the video in the first format while it sends the requested marked portion in the second format and then resumes transmission in the lower quality first format Lobod does not teach nor suggest the required elements of claim 11.



Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

**Claims 13-15, 17, and 19-21 Not Anticipated or Rendered Obvious by Lobodzinski**

38. The office action rejects claims 13-15, 17, and 19-21 by equating the transmitting device with the DIS 17 or US 200. For all the reason stated above, the strained interpretations is improper. The DIS 17 or US 200 is a source device and not a transmitting device for transmitting to a receiving device as required by these claims. Further as required by claim 15 the source device, which is a distinct element of the claim language from the transmitting device, is a medical test device such as an ultrasound device, so equating DIS 17 or ultrasound 200 with the transmitting device is improper.

39. Further claims 13-15, 17, and 19-21 contain many distinct elements such as "controller coupled to the storage device and configured for coupling to the receiving device for controlling transmission" with its other limitations.

40. Applicant submits that the office action has failed to provide valid arguments for rejection, for the reasons stated here as well as all the reasons stated above.

**Claims 16 and 18 Not Anticipated or Rendered Obvious by Lobodzinski**

41. Regarding claim 16 and 18, the office action acknowledges that these elements are required as part of the transmitting device of the claims, which supports applicant's arguments regarding claims 1 through 12 that the MVTs is not a receiving device as required by those claims.

42. Claims 16 and 18 dependent on claim 14 and 17, respectively, and for all the reasons stated above should be allowable.

**Claims 22-28 and 29-35 Not Anticipated or Rendered Obvious by Lobodzinski**

43. The office action rejects claims 22-28 and 29-35 by generically applying the reasons associated with claims 1-21. However, as discussed above, a thorough analysis of

Application # 09/436,432  
Amendment Dated: May 31, 2005  
Reply to Office Action Dated: December 29, 2004

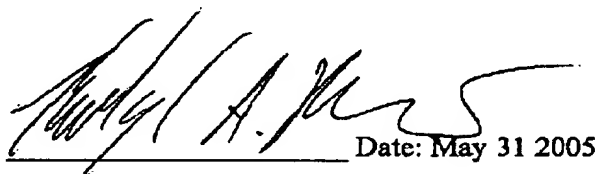
claims 22, shows that Lobod fails to teach three required devices. For all the reason stated above, Lobod fails to teach or suggest the required elements of these claims.

44. Further, claims claims 22-28 and 29-35 contain many distinct elements such as the receiving device with its distinct "received storage device" (as discussed above) and its other limitations.

45. Applicant submits that the office action has failed to provide valid arguments for rejection, for the reasons stated here as well as all the reasons stated above.

The undersigned respectfully submits that, in view of the foregoing amendments and remarks, the present application is believed to be in condition for allowance. It is respectfully requested that this application be considered and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned at 408-739-9517.

Respectfully submitted,



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